UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

08509359

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR		ATTORNEY DOCKET NO.
08/509,359	07/31/95	ST. GEORGE-HYSLOP	P	CAN-004

HM22/0412

Paul F. Fehlner, Ph.D.
Darby & Darby P.C.
805 Third Avenue
New York NY 10022

EXAMINER	
BURKE, J	
ART UNIT	**PAPER NUMBER**
1642	41

DATE MAILED: 04/12/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.	Applicant(s)
08/509,359	George-Hyslop et al
Examiner	**Group Art Unit**
Julie E. Burke (Reeves), Ph.D.	1642

☒ Responsive to communication(s) filed on *31 Jan 2000*.

☒ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire *three* month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) *95-108* is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) *95-108* is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐approved ☐disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

DETAILED ACTION

Response to Amendment

1. The text of Title 35 of the U.S. Code not reiterated herein can be found in the previous office action.

2. Claims 24, 71, 73-77 and 80-94 have been canceled and claims 95-108 have been added by Amendment F filed 31 Jan 2000. Claims 95-108 are pending and under examination.

3. It is noted that the substitute specification filed 13 Nov 1998 had been entered, as stated in the previous Office Action. It is not clear that the references to the specification in the response tracks with the sub specification filed 13 Nov 1998. For example, in the second full paragraph of page 5, the response states that the specification "explicitly defines a new term PS2 (E5-1) on page 12, lines 19-23, however support for that definition, or even the term (E5-1) is not found there. It is suggested that applicants update their files to refer to the currently entered copy of the specification.

GB
3/16/00

4. The following NEW GROUNDS of rejection have been necessitated by amendment.

Claim Objections

5. Claims 104-108 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 103 requires that the PS2 protein be encoded by SEQ ID NO: 137. Claims 104-108, which depend upon claim 103, encompass a broader scope

by introducing changes in the PS2 protein or into the DNA encoding the PS2 protein. For example, the A to T substitution at position 787 apparently changes a Histidine residue in SEQ ID NO: 137's gene product to an arginine residue in the gene product of claim 105.

6. Claims 95-108 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. New Claims 95-108 have been added.

a. The response states that the claims are supported by the entire specification. However, in view of the fact that the instant specification contains more than 200 pages, this general assertion is not sufficient. In order to provide a clear file record, use of page and line numbers is suggested.

b. Additionally, the response states that support for the claims can be found in the original claims and on particular passages of the specification, however this is not persuasive. The passages cited in the specification apparently do not track with the new claims. For example, page 30, lines 10-23 contain half of a listing and half of a paragraph. It is not clear which limitations in the new claims are supported by this section of the specification. Conversely, the limitation "95% sequence identity" was not found upon review of the originally filed claims or upon review of the sections of text cited on page 4, first full paragraph. Additionally, adequate support for the phrase "human presenilin-2 protein" is not found upon review of the originally filed claims or upon review of the sections of text cited on page 4, first full paragraph. Moreover,

the response states new term "PS2 (E5-1) is "explicitly defined" on page 12, lines 19-23. The Examiner was unable to find support for "human presenilin-2 protein" or for the E5-1 on that section, which reads:

"(Panel A) and several peripheral tissues (Panel C). In brain, the E5-1 transcript is of a lower molecular weight and lesser abundance that the ARMP transcript (panel B)".

Applicant is required to either point to where the specification provides support for each of the limitations in the new set of claims or to remove the phrases from the claims. If applicants wish to be granted the priority of their continuation in part parents, then page and line numbers of the text supporting each of the limitations in the claims, as written, needs to be provided.

Rejections Maintained

7. Newly added Claims 95, 97-102, 104-108 stand rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for E5-1 proteins "comprising" or "consisting of" the sequence of SEQ ID NO:138 (wild type protein) and SEQ ID NO:138 wherein the Asn at amino acid position 141 has been replaced by Ile and/or wherein the Met at amino acid position 239 has been replaced by Val (naturally occurring mutants), does not reasonably provide enablement for other mammalian and human E5-1 proteins, mutations, and splice variants thereof, for the reasons set forth in the previous Office Action.

a. The response set forth on page 6-8 has been considered carefully but is deemed not to be persuasive. The response argues that despite mutations, the references cited int the previous Office Action indication that the protein can be identified unambiguously. This argument

is not persuasive because the statute of 112, first paragraph and the holding of In re Wands does not require that one skilled in the art be able to identify the claimed subject matter, but that one skilled in the art should be able to make and use the claimed invention without undue experimentation.

b. The response states that the specification teaches two splice variants and two muteins (pages 7-8 bridging paragraph), however, upon review of the various page and line numbers recited int the response, the Examiner was unable to find adequate support for the material relied upon in the argument. For example, page 27, lines 15-16 recites "'strong' start codons, the putative 5' UTR of the human transcripts are rich in GC". It is clear how this text, support Applicant's position that the specification describes nucleic and sequence homology to human and non-mammalian proteins. Similarly, the response cites page 20, lines 13-19 and page 27, lines 11-16 in support of BLAST. Upon review of those sections, the Examiner was unable to find any mention of BLAST or any other computer program.

c. The fact remains, that, upon reconsideration, in view of the breadth of the claims, the inadequate guidance and insufficient examples set forth in the specification, the high level of unpredictability associated with regard to producing and using the myriad of derivatives encompassed in the scope of the claims, as evidenced by the cited art, one skilled in the art would be forced into undue experimentation in order to practice the broadly claimed invention.

8. Newly added claims 95, 97-102, 104-108 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way

as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, for the reasons set forth in the previous Office Action .

a. The response set forth on page 8-9 has been considered carefully but is deemed not to be persuasive. The response argues that various sections of the specification provide support for allelic variants. As set forth in the previous rejection, it is not clear how each of the segments of specification cited in the response support the arguments in the response. How does the text on page 30, lines 10-18, which include three lines of a table, taken out of context, and part of a paragraph describing how mutations were not detected in genomic DNA of affected family members support the instant argument? It seems as though the response is directed to another version of the specification than that entered in the application.

b. The fact remains that the written description in this case only sets forth the isolated E5-1 proteins (1) which consist of or comprise SEQ ID NO: 138 (wildtype); (2) which is encoded by SEQ ID NO: 137 (wildtype); (3) which consist of or comprise SEQ ID NO: 138, wherein the Asn residue at position 141 is substituted by Ile and/or wherein the Met residue at position 239 is substituted by Val (naturally occurring mutants) or (4) which are encoded by SEQ ID NO: 138, wherein the A nucleotide at position 787 is substituted by T nucleotide and/or the A nucleotide at position 1080 is substituted by a G nucleotide (naturally occurring mutants).

Status of Claims

9. Newly added Claims 95-108 are rejected.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julie E. Burke, née Reeves, Ph.D, whose telephone number is (703) 308-7553. The examiner can normally be reached on Monday through Friday from 8:00 am to 5:30 pm, with alternate Fridays off. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula Hutzell, can be reached on (703) 308-4310. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0196.

12. Papers related to this application may be submitted to Group 1600 by facsimile transmission. Papers should be faxed to Group 1600 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CM1 Fax Center telephone number is (703) 305-7401.

Respectfully,

Julie E. Burke, née Reeves, Ph.D.

Primary Patent Examiner

(703) 308-7553

JULIE BURKE
PRIMARY EXAMINER